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**Cotton Fiber and Processing Test Results**

**CROP of**

**1974**



**Agricultural Marketing Service  
U.S. DEPARTMENT OF AGRICULTURE  
Memphis, Tenn. 38122 January 31, 1975**

This is the last report for the 1974 crop. These reports were published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.<sup>1/</sup> These reports are available on request from the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN 38122.

<sup>1/</sup> Summary of Cotton Fiber and Processing Test Results, Crop of 1973, USDA, AMS, Cotton Division, May 1974.



## COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1974

### Discussion of Test Results

Cotton Division laboratories of the Agricultural Marketing Service, USDA, report that cotton fibers from the Southwest short staple samples tested to date are less uniform and finer than through the comparable period a year ago. Shirley Analyzer nonlint content and picker and card waste are higher than a year ago. Yarns spun from these samples show considerably lower yarn appearance grades. Yarn imperfections are much higher than last season.

Averages for all medium staple samples tested through January 24 show fibers to be finer and stronger at 1/8" gage strength test. Picker and card waste is higher than a year ago. Yarns spun from these samples show about the same qualities as last season.

Medium staple samples tested from the Southeast show finer fibers than a year ago. Picker and card waste is higher this year. Yarns spun from these samples show slightly fewer imperfections.

No additional medium staple samples were received from the South Central area during this report period.

Southwest medium staple samples tested to date show finer and stronger fibers at both zero and 1/8" gage tests. Picker and card waste is higher than last year. Yarns spun from these samples show lower appearance grades.

Medium staple samples tested from the West show coarser fibers than a year ago. Picker and card waste is higher than last season. Other test results were about the same.

Averages for all long staple samples tested to date are longer and finer than through this date last year. Comber waste is less. Yarn appearance grades are lower for both carded and combed yarns. Yarn imperfections are higher for carded yarns than a year ago.

No additional long staple lots were received from either the Southeast or South Central areas during this report period.

Long staple samples tested from the West show stronger fibers this season as compared with last season. Comber waste is less. Yarns spun from these samples show weaker yarn strength for carded yarns.

Extra long staple, American Pima, samples from the West show fiber shorter, finer and weaker at 1/8" gage tests than a year ago. Shirley Analyzer nonlint content is less than last season. Yarns spun from these samples show combed yarn strength to be weaker than a year ago. Yarn appearance grades were lower than last season.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States  
1/ through January 24, 1975

Staple group Area, and Crop year	Lots tested	Fiber test results						Processing test results						
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.		
		2.5% span	50/2.5 unif.		Pct.	Rdg.			Mpsi	G/tex	Skein str.		Appearance	Imperf- actions
No.	Inches	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Lbs.	Index	No.	Yarn No.			
<u>Short Staple:</u> Southwest	65	.96	46	4.5	83	21	3.3	6.3	91	109	16	42		
	55	.96	44	3.8	83	21	4.0	7.3	90	90	26	40		
<u>Medium Staple:</u> Southeast	57	1.08	46	4.5	82	22	3.6	6.0	101	105	21	61		
	51	1.09	45	4.3	81	22	3.4	6.5	102	103	19	61		
South Central	167	1.10	45	4.5	81	22	3.1	5.8	101	107	19	61		
	128	1.10	44	4.0	83	22	3.2	6.3	105	102	18	63		
Southwest	50	1.07	45	4.3	82	22	3.0	5.7	98	97	23	57		
	48	1.07	44	4.0	84	23	3.3	6.5	100	87	24	57		
West	68	1.10	45	4.3	91	25	2.4	5.2	116	101	17	66		
	72	1.11	46	4.5	91	25	2.5	6.0	115	103	16	66		
U. S. Average	342	1.09	45	4.4	84	22	3.1	5.7	104	104	20	62		
	299	1.10	44	4.2	85	23	3.1	6.3	106	100	19	63		
Significant dif- ference	2/	0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3		

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States  
through January 24, 1974  
1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results										SPY
		Span	Length	Unif	Mike	Strength Zero gage	SA Non- lint	P&C Waste	Comber Waste	Yarn Quality					No.	No.		
										carded	combed	carded	combed	card			combed	
<u>22s Carded &amp; Combed Yarn</u>																		
Long Staple: Southeast	No.	In.	Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.	Pct.	Lbs.	Lbs.	Indx	Indx	No.	No.	No.	No.	
	18	1.12	45	4.6	81	23	3.9	8.7	17.0	103	119	117	124	14	7	65		
1973	15	1.15	43	4.0	82	23	4.0	8.7	17.2	104	118	104	110	21	14	67		
South Central	7	1.14	44	4.3	85	24	4.3	8.8	17.3	108	126	114	126	20	9	64		
	6	1.15	44	4.0	85	23	4.0	8.8	18.0	105	125	102	113	19	8	65		
West	15	1.15	45	3.6	91	27	2.7	7.6	15.7	132	150	95	106	19	10	88		
	14	1.16	45	3.7	93	27	2.7	7.4	15.1	128	148	96	108	20	9	89		
U. S. Average	40	1.13	45	4.2	86	24	3.5	8.3	16.6	115	132	108	118	17	9	74		
	35	1.15	44	3.9	87	24	3.5	8.2	16.1	114	129	101	108	20	8	75		
<u>Array</u>																		
American Pima																		
Extra Long Staple: West	20	1.46	31	3.7	101	34	3.4	8.1	18.4		67		118		1			
	19	1.44	32	3.5	100	32	2.9	8.0	18.0		64		110		2			
Significant Difference 2/	0.02	2	0.2	2	1	0.5	0.5	0.5	0.5	4(22s)	5	5	2	2	2	3		
										4(22s)	2(50s)							

Array

American Pima

50's Combed Yarn

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.



Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1974

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns											
No	Grade	Name & Code	Style	32s		Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial
				In	Pct	2.5% span	Unif		Zero Gage	1/8" Gage		Pct	Pct	Gra	Yel		Lbs	Lbs	8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx	
SOUTHWEST AREA																									
CENTRAL TEXAS																									
BYERS																									
2	SLM	LT SP	42	30	0.97	45	4.3		82	21	6.7	3.7	4	3	7.1	292	88	7.1	6.4	120	100	31	19	40	
3	SLM	LT SP	42	30	0.97	46	4.7		86	22	5.9	3.4	4	3	7.9	293	87	6.8	6.0	120	100	28	18	36	
NORTHWEST TEXAS																									
ANSON																									
3	SLM	LT SP	42	31	0.96	43	4.1		83	21	6.7	3.9	4	3	6.9	307	93	7.5	6.8	110	90	51	25	43	
BURKBURNETT																									
3	SLM	LT SP	42	31	0.97	44	4.6		82	20	5.9	3.7	3	4	7.4	294	85	7.6	6.3	120	80	41	22	37	
KNOTT																									
3	MID	LT SP	32	31	0.95	45	3.9		83	20	6.2	3.2	2	4	6.6	310	97	7.5	6.6	130	110	30	17	40	
PADUCAH																									
2	MID	LT SP	32	31	0.96	43	3.6		78	21	7.1	3.3	2	4	5.9	300	92	7.6	6.7	110	90	49	29	39	
RULE																									
2	SLM	LT SP	42	32	1.01	42	3.4		81	21	7.1	3.9	2	3	6.6	309	96	7.5	7.2	120	80	59	31	47	
SNYDER																									
2	SLM	LT SP	42	32	1.02	42	3.5		89	23	6.1	3.6	2	4	6.3	333	105	7.1	6.5	120	90	43	27	48	
3	SLM	LT SP	42	32	0.99	43	3.7		84	23	5.8	4.0	4	4	6.5	322	100	7.2	6.5	110	80	22	15	45	
OKLAHOMA																									
CARNEGIE																									
3	SLM	LT SP	42	33	1.03	45	3.8		77	21	7.1	3.9	2	4	7.4	314	91	8.0	7.3	110	70	64	42	47	
DAVIDSON																									
3	SLM	LT SP	42	32	1.03	44	4.0		84	22	6.1	3.8	3	4	7.2	317	98	8.0	7.0	110	80	47	32	46	
TERRAL																									
2	LM	LT SP	52	30	0.91	43	4.5		82	20	5.6	2.7	5	3	7.6	249	70	5.9	5.2	120	90	68	38	26	
3	LM	LT SP	52	30	0.95	44	4.9		81	20	5.8	3.6	6	4	7.8	244	66	5.5	5.0	120	100	32	15	25	



Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974

Production Area, Classification &				Fiber Test Results										Processing Test Results - Carded Yarns									
Sample Number		Stple	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste		Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent- tial	
No	Grade		2.5% span	Unif.		Zero Gage	1/8" Gage			Gra	Yel	Pct	No	Pct	Lbs	Lbs	Pct	Pct	22s or 27 tx	50s or 12 tx	22s or 27 tx		50s or 12 tx
32s																							
AREA																							
SOUTHEAST																							
GEORGIA																							
COMER																							
3	LM	51	35	1.11	43	3.8	78	21	6.1	4.3	2	3	7.4	100 PERCENT	101	35	6.7	4.8	90	70	34	21	58
SOUTHWEST																							
NORTHWEST TEXAS																							
VERNON																							
2	SLM LT SP	42	32	1.03	45	4.7	85	22	6.1	3.4	2	3	7.7	100 PERCENT	85	24	5.6	4.7	80	37	30	37	
3	SLM LT SP	42	32	1.01	45	4.4	81	23	6.6	4.6	3	3	7.4		89	27	5.7	4.3	80	70	38	30	43
VERNON																							
2	SLM LT SP	42	32	1.07	45	4.2	89	25	5.8	4.5	3	4	7.9	100 PERCENT	101	33	6.2	4.3	80	70	32	23	50
3	LM LT SP	52	32	1.06	44	4.2	89	25	6.1	5.9	4	3	8.5		99	31	5.8	4.2	90	70	29	22	50
WEST																							
ARIZONA																							
BOWIE																							
4	SLM	41	35	1.10	43	3.9	80	22	7.0	4.6	1	2	6.5	94 PERCENT	99	34	7.0	5.2	80	70	29	26	57
CALIFORNIA																							
WESTMORLAND																							
4	SLM	41	34	1.09	42	3.8	88	24	6.4	3.1	1	2	6.2	100 PERCENT	106	34	6.1	4.4	90	70	24	18	58

Table 4 --Cotton, American upland long staple: Quality characteristics by production areas, crop of 1974

Production Area, Classification & Sample Number				Fiber Test Results							Processing Test Results - Carded Yarns											
No	Grade	Name & Code	Stple	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8" Gage	S.A. Non-Lint	Color Raw Stock		P & C Comber and Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potential
				2.5% span	Unif.		Zero Gage	1/8" Gage			Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	
32s				In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No
WEST AREA																						
NEW MEXICO																						
ANIMAS																						
4	SLM		41	37	1.18	45	3.4	97	28	ACALA 1517-V	1	3	8.1	131	46	6.7	5.1	110	90	17	9	88
											*	15.3	151	55	6.8	5.3	120	100	8	6		
75 PERCENT																						
WEST TEXAS																						
EL PASO																						
4	SLM		41	36	1.17	46	3.8	94	27	ACALA 1517 C	1	1	8.2	124	44	6.2	4.7	100	80	18	12	86
											*	15.5	145	53	6.2	5.2	120	100	9	5		
100 PERCENT 1/																						

1/ 100 percent selected for tests, less than 100 percent in the area

\* Comber Waste and Combed Yarn Data

Table 5 --Cotton, American Pima extra long staple: Quality characteristics by production areas, crop of 1974

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Combed Yarns											
Grade & Code		Stple	Array Length		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns					
			UQL	CV		Zero Gage	1/8" Gage			Gra	Yel			Lbs	Lbs	Pct	Pct	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx		
No	Name & Code		32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No			
WEST AREA																									
ARIZONA																									
3	4	44	1.50	32	3.7	101	33	PIMA S-4	6.8	2.9	4	4	7.8	18.9	100 PERCENT	66	36	5.7	4.8	110	120	1	1		
QUEEN CREEK																									
3	4	46	1.48	30	3.8	103	34	PIMA S-4	6.8	3.6	4	5	7.2	17.6	100 PERCENT	67	37	5.7	4.8	120	120	1	1		
WEST TEXAS																									
FABENS																									
4	4	44	1.36	35	3.1	99	30	PIMA S-4	7.1	4.4	4	5	8.6	19.2	100 PERCENT	64	35	5.8	4.9	110	120	3	3		
PECOS																									
3	4	44	1.41	35	3.0	96	30	PIMA S-4	7.3	3.0	5	6	10.1	20.8	100 PERCENT *	64	34	5.8	5.0	100	90	6	4		

\* 100 percent selected for tests, less than 100 percent in the area

